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THE INDUSTRIAL ARTS INDEX

FIRST ANNUAL CUMULATION

SUBJECT INDEX TO A SELECTED LIST OF
ENGINEERING AND TRADE PERIODICALS
FOR 1913

EDITED BY
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With this issue the *Industrial Arts Index* completes its first volume. The removal of the publishers from Minneapolis to White Plains prevented the publication of a number in December. The present issue however, is a complete index for 1913 of the magazines listed on the following page. Numbers one and two of volume two will be published as a double number in April and the publishers hope to resume thereafter the regular schedule.

The four numbers thus far published have been in the nature of an experiment. The list of periodicals is still far from complete, and the method of indexing will no doubt need modification as the work is enlarged. Suggestions will be welcome both as to the list of magazines and the improvement of the indexing. Ice and Refrigeration, The Proceedings of the American Society of Civil Engineers', the Electrical Journal, and American Machinist do not appear on the list as the publishers have not yet sent us copies for indexing. The Textile World Record, General Electrical Review, Journal of American Institute of Architects, American Gas Light Journal have been chosen as the next additions, while the indexing of Horseless Age and Electrical Review and Western Electrician which was necessarily omitted from this volume, will be carried back to the beginning of 1913.

One of the difficulties of indexing engineering magazines is to indicate the fact that certain articles appear in more or less similar form in several different periodicals. As the titles of these articles usually vary, it takes a good deal of time to establish their identity or partial identity. This happens frequently in the case of reports or abstracts of papers presented before engineering or trade societies. The original paper may be published in one magazine, a portion of it in another, reasonably full abstracts in a third, and perhaps a brief summary in a fourth. An expression of opinion is very much desired as to the importance of indicating the relationship of these articles to one another. Should they be combined in one entry under one title,

with some abbreviation or symbol to show the relationship e. g. "Same cond." or "excerpts," or might they be entered separately each under its own title and the time thus saved be spent more profitably in improvements in other directions?

Miss Louise Teich has edited copy and read the final proof of this index. Credit is due also to Mrs. Nellie Shimer for valuable assistance.

The American Institute of Mining Engineers publishes an index to volumes 36 to 40 of its Transactions, covering the years 1905 to 1909. This index supplements the "General Alphabetical and Analytical Index" of volumes 1 to 35. A new arrangement of material under group headings is introduced.

The American Society for Testing Materials has published an index to the first twelve volumes of the Proceedings of the society. Volume 1 contains the index to the twenty-eight bulletins that were issued at irregular intervals from 1898 to 1902. Volume 2 contains the index to the annual volumes which have been issued since that date, including the volume for 1913. A table of contents giving the contents for each individual volume follows the index proper.

The "Index to Transactions of the American Institute of Electrical Engineers" in two volumes has been issued by that society. "This index consists of two separate parts, each intended for a distinct purpose. First. There is an index of papers in which they are classified in natural groups and arranged chronologically in each group. Second. There is an index to specific data and information arranged alphabetically. The index of papers is intended for searchers desiring to locate papers on a given subject, and to aid in this search the papers have been characterized. These characterizations are not intended to be abstracts of the papers, but rather to give the scope and nature of their contents. . . . The index to specific data and information is intended for searchers desiring to make a complete study of the subject as presented in the Transactions. There is a great mass of valuable information hidden in discussions which has no very direct connection with the subject of the paper. This data can be found only by reference to such a topical index." (Introduction) Volume 1 covers the period from 1884 to 1900 inclusive; volume 2, from 1901 to 1910 inclusive.

List of Periodicals Indexed

- Am Eng**—American Engineer. See Ry Age (Mech ed).
- Am Ind**—American Industries. \$1; single numbers 10c. National Manufacturers Co., 30 Church St, New York.
- Am Inst E E Pro**—American Institute of Electrical Engineers. Proceedings. \$10; single numbers \$1. F. L. Hutchinson, sec., 33 W. 39th St, New York.
- Am Inst Min E Bul**—American Institute of Mining Engineers. Bulletin. subs. \$10; to members, public libraries, and educational institutions, \$5. Joseph Struthers, sec., 29 W 39th St, New York.
- Am Mach**—American Machinist. \$4; single * numbers 15c. Hill Pub. Co., 505 Pearl St, New York.
- Am Soc M E J**—Journal of the American Society of Mechanical Engineers. \$3; single numbers 35c. American Society of Mechanical Engineers, 29 W 39th St., N. Y.
- Arch & Bldg**—Architecture and Building. \$2; single numbers 20c. William T. Cornstock Co., 23 Warren St, New York.
- Arch Rec**—Architectural Record. \$3; single numbers 35c. Architectural Record Co., 119 W. 40th St, New York.
- Automobile**—Automobile. \$3; single numbers 20c. -Class Journal Co., 231 W 39th St, New York.
- Brickb**—Brickbuilder. \$5. Rogers & Manson, 85 ‡ Water St, Boston.
- Colliery**—Colliery Engineer. \$2; single numbers 25c. International Textbook Co., Scranton, Pa. Formerly Mines and Minerals.
- Concrete Cem**—Concrete-Cement Age. \$1.50; single numbers 15c. Concrete-Cement Age Pub. Co., 97 West Fort St, Detroit, Mich.
- Dom Eng**—Domestic Engineering. \$2; single numbers 10c. Domestic Engineering Co., 445-447 Plymouth Court, Chicago.
- Elec Ry J**—Electric Railway Journal. \$3; single numbers 10c. McGraw Pub. Co., 239 W 39th St, New York.
- Elec R & W Elec'n**—Electrical Review and * Western Electrician. \$3; single numbers 10c. Electrical Review Pub. Co., 608 S Dearborn St, Chicago.
- Elec W**—Electrical World. \$3; single numbers 10c. McGraw Pub. Co., 239 W 39th St, New York.
- Eng & Min J**—Engineering and Mining Journal. \$5; single numbers 15c. Hill Pub. Co., 505 Pearl St, New York.
- Eng M**—Engineering Magazine. \$3; single numbers 25c. Engineering Magazine Co., 140 Nassau St., New York.
- Eng N**—Engineering News. \$5; single numbers 15c. Hill Pub. Co., 505 Pearl St, New York.
- Eng Rec**—Engineering Record. \$3; single numbers 10c. McGraw Pub. Co., 239 W 39th St, New York.
- Foundry**—Foundry. \$1; single numbers 15c. The Foundry, Cleveland, O.
- Heat & Ven**—Heating and Ventilating Magazine. \$1; single numbers 10c. Heating & Ventilating Magazine Co., 1123 Broadway, New York.
- Horseless Age**—Horseless Age. \$2. Horseless ‡ Age Co., 250 W 54th St., N. Y.
- Ill U Eng Exp Sta Bul**—Illinois University Engineering Experiment Station. Bulletin. Univ. of Ill., Urbana.
- Ind Eng**—Industrial Engineering and Engineering Digest. \$2; single numbers 20c. Technical Literature Co., 120 W. 32d St., New York.
- Inland Ptr**—Inland Printer. \$3; single numbers 30c. Inland Printer Co., 624 Sherman St, Chicago.
- Int Marine Eng**—International Marine Engineering. \$2. Aldrich Pub. Co., 17 Battery Place, New York.
- Iron Age**—Iron Age. \$5; single numbers 20c. David Williams Co., 239 W 39th St, New York.
- Iron Tr R**—Iron Trade Review. \$4; single numbers 15c. Penton Pub. Co., Penton Bldg., Cleveland, O.
- J Account**—Journal of Accountancy. \$3; single numbers 30c. Ronald Press Co., Coopers-town, N. Y.
- J Fr Inst**—Journal of the Franklin Institute. \$5; single numbers 50c. Franklin Institute, Philadelphia.
- J Ind & Eng Chem**—Journal of Industrial and ‡ Engineering Chemistry. \$6. American Chemical Society, Easton, Pa.
- Locomotive**—Locomotive. 50c; single numbers gratis; recent bound volumes \$1. Hartford Steam Boiler Inspection & Insurance Co., Hartford, Conn.
- Mach**—Machinery. Engineering edition \$2; coated pa. \$2.50. Industrial Press, 140 Lafayette St, New York.
- Met & Chem Eng**—Metallurgical and Chemical Engineering. \$2; single numbers 25c. McGraw Pub. Co., 239 W 39th St, New York.
- Metal Ind n s**—Metal Industry new series. \$1; single numbers 10c. Metal Industry, 99 John St, New York.
- Mines & Min**—Mines and Minerals. See Colliery.
- Munic Eng**—Municipal Engineering. \$2; single numbers 25c. Engineering Pub. Co., Indianapolis, Ind.
- Power**—Power. \$2; single numbers 5c. Hill Pub. Co., 505 Pearl St, New York.
- Ry Age**—Railway Age Gazette. \$5; single numbers 15c. Simmons-Boardman Pub. Co., Woolworth Bldg, New York.
- Ry Age (Mech ed)**—Railway Age Gazette, mechanical edition including the American Engineer. \$2; single numbers 20c. Simmons-Boardman Pub. Co., Woolworth Bldg, New York.
- Ry & Eng R**—Railway and Engineering Review. \$4; single numbers 15c. Railway Review, 1407 Ellsworth Bldg, Chicago.
Continued as Railway Review.
- Sci Am**—Scientific American. \$3; single numbers 10c. Munn & Co., 361 Broadway, New York.
- Sci Am S**—Scientific American Supplement. \$5; single numbers 10c. Munn & Co., 361 Broadway, New York.
- Stevens Ind**—Stevens Indicator. \$1.50; single numbers 50c. Stevens Institute of Technology, Hoboken, N. J.
- U S Agric Bul**—United States. Dept. of Agriculture. Bulletin. Distributed free of charge. U. S. Dept. of Agriculture, Division of Publications, Washington, D. C.
- U S Bur Chem Bul**—United States. Bureau of Chemistry. Bulletin. Distributed free of charge. U. S. Dept. of Agriculture, Division of Publications, Washington, D. C.
Included, after bulletin 166, in the Bulletins of the United States. Dept. of Agriculture.
- U S Bur Mines Bul**—United States. Bureau of Mines. Bulletin. Distributed free of charge. U. S. Bureau of Mines, Washington, D. C.
- U S Bur Stand Bul**—Bulletin of the United States Bureau of Standards. quarterly. \$1. Superintendent of Documents, Union Bldg, Washington, D. C.
- U S Forest Serv Bul**—United States. Forest Service. Bulletin. Distributed free of charge. U. S. Dept. of Agriculture, Division of Publications, Washington, D. C.
Included, after bulletin 127, in the Bulletins of the United States. Dept. of Agriculture.
- U S Pub Road Bul**—United States. Office of Public Roads. Bulletin. Distributed free of charge. U. S. Dept. of Agriculture, Division of Publications, Washington, D. C.
Included, after bulletin 48, in the Bulletins of the United States. Dept. of Agriculture.

* A few numbers only are indexed

‡ Periodicals elected but not yet indexed

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A Cumulative Index to Engineering and Trade Periodicals

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Ability tests

- Are men better typists than women? scientific tests made by J. M. Lahy. J. Boyer. *il Sci Am* 109:316 O 25 '13
Mental tests to grade pupils at school. *Sci Am S* 75:87 F 8 '13
Psychological tests of motormen. *Elec Ry J* 42:66-7 J 12 '13
Scientific selection of workmen. *Eng Rec* 67:171 F 15 '13

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Abrasives

- Carborundum and alundum: a comparison with emery. S. A. Cochell. *Metal Ind n s* 11:249-50 Je '13

See also Emery wheels; Grinding and polishing

Absecon inlet

- Channel- and beach-maintenance problem at Atlantic City. R. R. Raymond. *map Eng N* 70:150-4 J 12 '13
Proposed improvement of an ocean bar at Atlantic City, N. J. L. M. Haupt. *Eng N* 70: 523-4 S 11 '13

Absorption of light

- Absorption of light in space. E. S. King. *il Sci Am S* 75:171 Mr 15 '13

Absorption spectra. *See* Spectra—Absorption spectra

Absorption system. *See* Refrigeration and refrigerating machinery

Absorption towers

- Absorption and reaction towers for chemical factories. *diags Met & Chem Eng* 11:359-61 Je '13

Abu, Mount

- Temples of Dilwara on Mount Abu. T. G. Dalal. *il Sci Am S* 76:200-1 S 27 '13

Abutments. *See* Bridges—Abutments

Acacias

- Economic study of acacias. C. H. Shinn. *il U S Agric Bul* 9:1-38 '13

Academic efficiency. W: Kent. Stevens *Ind* 30: 20-36 Ja '13

Accelerometer

- Detecting resistance—saving fuel. W. C. Marshall. *il Automobile* 28:833-5, 888-90, 937-9, 978-9 Ap 17-My 8 '13
Tester uses accelerometer on trucks. *Automobile* 29:200-3 J 31 '13

Accident law. *See* Negligence; Personal injuries; Workmen's compensation

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- Few miscellaneous accidents. *Sci Am S* 76: 407 D 27 '13
Prevention of elevator accidents. R. P. Bolton. *Ind Eng* 13:251-3 Je '13

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- Accident prevention. J. B. Douglas. *il Sci Am S* 76:232-4 O 11 '13
Accident prevention at Rochester, N. Y. *il Am Ind* 13:24-7 Ap '13
Accident prevention in construction work. *Sci Am S* 75:362-3 Je 7 '13

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- Accidents in iron and steel mills: comparison for the United States and Germany. *Iron Age* 92:425 Ag 21 '13
Accidents on Catskill aqueduct. *Eng Rec* 67: 320 Mr 22 '13
Conservation of the worker. A. Cotter. *il Eng M* 45:489-505 J 1 '13
Industrial accident costs in Massachusetts. *Eng Rec* 67:338-9 Mr 29 '13
Lessons of a power plant accident. H. S. Knowlton. *Power* 37:49-50 Ja 14 '13
Luck, law and industrial accidents discussed. W: H. Doolittle. *Iron Tr R* 52:921-2 Ap 17 '13; Same cond. *Iron Age* 91:945-6 Ap 17 '13
Metal-mining accidents; Catskill aqueduct accidents. *Eng & Min J* 95:1009-10 My 17 '13

- Museums of safety and their activities: a brief history of movement for prevention of industrial accidents. M. S. Hutton. *Mach* 19:31-3 S '12
Ordinary precautions in construction work. *Eng Rec* 67:433-4 Ap 19 '13
Practical work in industrial advancement. *Am Ind* 13:12-5 J 1 '13

- Prevention of accidents in central stations. *il Elec W* 61:986-9 My 10 '13
Prevention of accidents in factories. *il Sci Am S* 76:212-4 O 4 '13
Prevention of disease versus cost of living. T: F. Harrington. *Sci Am S* 75:402-3 Je 28 '13

- Recording memoranda on accident prevention. T: D. West. *Am Ind* 14:19-20 D '13

- Relative vocational hazards. H. Davis. *Colliery* 33:485-6 Ap '13

- Safety engineering should form part of every engineering course. G. Gilmour. *il Sci Am S* 76:36-9 J 19 '13

- Sanitation and safety in heavy-chemical production. F. D. Patterson. *il Am Ind* 13:28-31 Mr '13

- Taking chances on a sewer trench. *il Munic Eng* 44:184-5 Mr '13

- Three years of accident prevention: results of Eastman kodak co. *il Iron Age* 91:1058-61 My 1 '13

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- Account analysis in commercial banks. H. C. Thompson. *J Account* 16:210-29 S '13

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 Development of systems of control. F. R. C. Steele. J Account 16:280-90 O '13
 Distribution of accounts of road construction. Munic Eng 44:524-7 Je '13
 Ford service system. Automobile 28:470-3 F '13
 Investigating an industry: accounting and sales departments. W: Kent. Ind Eng 13: 208-11 My '13
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 Practical principles of rational management. A. H. Church. Eng M 45:166-73 My '13
 Some essentials of public service accounting. A. F. Elkins. Elec Ry J 42:1276 D 20 '13
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Ability of the acetylene flame. E. M. Chance.

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Acetylene lamps in coal mines. Colliery 34: 49-51 Ag '13

Acetylene lighting system defended. R. H. Coombs. Automobile 29:514-5 S 18 '13

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Acetylene-electric flame. C. F. Lorenz. il Elec W 61:511-5 Mr 8 '13

Acetylene for lighthouses, buoys, etc.

Marine lighting equipment of the Panama canal. J. Pattison. diags Eng N 69:1057-9 My 22 '13

Acid-proofing the floors of battery rooms. plan Met & Chem Eng 11:56 Ja '13

Acid waste

Disposal of acid waste in schools. J. Graham. diags Dom Eng 63:212-4 My 24 '13

Acidimetry

Benzoic acid as an acidimetric standard. G: W. Morey. U S Bur Stand Bul 8:643-50 Mr 1 '13

Acids

Manufacture of chemically pure acids; problems encountered. J. T. Baker. il Sci Am S 75:94-6 F 8 '13

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Air currents and their relation to the acoustical properties of auditoriums. F. R. Watson. Eng Rec 67:265-8 Mr 8 '13

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Frame work on an adding typewriter. R. Mawson. il Am Mach 38:847-50 My 22 '13

Adobe bricks

Strength of adobe brick. Eng & Min J 96:1074 D 6 '13

Advertising

Advertising for the printer. C: W. Hoyt. Inland Ptr 50:525-7 Ja '13

Advertising in printing trade. M. Gross. Inland Ptr 50:524-5 Ja '13

Advertising printing—a profitable field. E. R. Roeder. Inland Ptr 52: 381-2 D '13

Cost of advertising in country daily and weekly newspapers. E. K. Whiting. Inland Ptr 51:718-20 Ag '13

Higher advertising rates for country papers. Inland Ptr 51:557-9 Jl '13

How shall we make advertising effective? J: K. Allen. Dom Eng 64:341-2 S 20 '13

It pays to advertise. A. G. Brenton. Inland Ptr 50:843-5 Mr '13

Newspaper work. O. F. Byxbee. See monthly numbers of the Inland printer

Printers' advertising. W. H. Wright. Inland Ptr 51:838-40 S '13

Publicity for plumbers. Dom Eng 62:311-2 Mr 15 '13

Reaching the public through printing. W: T. O'Donnell. Inland Ptr 51:406-8 Je '13

Securing business by a house organ. C: W. Hoyt. Inland Ptr 51:682-4 Ag '13

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Sliding scale of advertising costs. J. C. Morrison. Inland Ptr 52:433-6 D '13
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Job with a curse. W. A. Olsen. Inland Ptr 51:685-7 Ag '13

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Aviation to-day: Importance of a national aerodynamic laboratory. W. I. Chambers. Il Sci Am S 75:124-6 F 22 '13

Langley aerodynamical laboratory. C. H. Butman. Sci Am 108:538 Je 14 '13

National aerodynamic laboratory. Sci Am 108:26 Ja 11 '13

Need for an aerodynamic laboratory in the United States. W. I. Chambers. Eng M 44: 764-7 F '13

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Comparative efficiency of Eiffel surfaces: studies in aeroplane design. R. D. Andrews. Sci Am S 75:307 My 17 '13

Laws of similitude and their application in aeroplane design. L. Bairstow. Il Sci Am S 76:109-10 Ag 16 '13

Reflections on aerial flight: fallacy of pendulum stabilizers. H. R. A. Mallock. diag Sci Am S 76:398-400 D 20 '13

Stream lines around obstacles to air currents. Il Sci Am S 75:268-9 Ap 26 '13

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Airhole of landing. E. Heinkel. Am Soc M E J 35:690-1 Ap '13

Airman and the weather: aeronautic meteorology. C. F. Talman. Il Sci Am 109:94 Ag 2 '13

Direction of aerial highways. Sci Am 109:298 O 18 '13

Germany's aeronautical weather bureau. Sci Am 108:262 Mr 22 '13

Measurement of the true static pressure in a moving fluid—application to an aeroplane barograph. A. F. Zahm. J Fr Inst 175:503-9 My '13

Progress in air navigation. J. D. Holmes. Sci Am 109:211 S 13 '13

Recent aviation events. Il Sci Am 109:229 S 20 '13

Reflections on aerial flight: fallacy of pendulum stabilizers. H. R. A. Mallock. diag Sci Am S 76:398-400 D 20 '13

Scientific instruments used in aeronautics: devices for determining direction, speed and side-slip of aeroplanes. H. Darwin. Il Eng M 45:893-5 S '13

Stability in flying machines. A. A. Merrill. Am Soc M E J 35:1465-78 O '13

Traveling through inter-stellar space what type of motor would you employ? Sci Am S 75:263 Ap 26 '13

Way stations for a relay flight to Europe. H. H. Suplee. map Sci Am 109:496 D 27 '13

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Achievements of military aircraft. H. Bannerman-Phillips. Il Sci Am 108:306-7 Ap 5 '13

Aerial battleships and flying torpedo boats: German dirigibles versus French aeroplanes. Sci Am S 76:35 Jl 19 '13

Aeroplane in war. Sci Am 108:574 Je 28 '13

Air scouting at the Italian maneuvers. Sci Am 109:355-6 N 1 '13

Bombarding a defense with dirigibles. Sci Am 109:2 Jl 5 '13

Bomb-dropping in the Balkans. Sci Am 109: 278 O 11 '13

Coming army aeroplanes. C. H. Claudy. Sci Am 108:127 F 1 '13

Curtiss military biplane. S. Y. Beach. Il Sci Am 108:240 Mr 15 '13

Dissecting the military dirigible airship V. I. A. Gradenwitz. Il Sci Am 109:164 Ag 30 '13

Fighting in the air. C. Dienstbach. Sci Am 109:86 Ag 2 '13

Military supremacy of the air. T. M. R. von Keler. Sci Am 108:6 Ja 4 '13

Military value of low flying. C. Dienstbach. Sci Am 109:210 S 13 '13

Mining the air with balloon torpedoes. II. Bannerman-Phillips. Sci Am 108:538 Je 14 '13

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Repelling aeroplanes from the ground. C. Dienstbach. Sci Am 109:319 O 25 '13

Requirements for scout type military aeroplane. Sci Am S 75:156 Mr 8 '13

Sea and air command: Germany's new policy in its relation to the British naval supremacy. Il Sci Am S 75:392-5 Je 21 '13

Why we need an aerial navy. Sci Am 108: 330 Ap 12 '13

Work of aircraft in the French maneuvers, 1913. H. Bannerman-Phillips. Il map Sci Am 109:322 O 25 '13

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Naval airship. C. Dienstbach. Sci Am 109: 378 N 15 '13

Aero-parachute. Levavasseur and Gastambide. Am Soc M E J 35:1285-7 Ag '13

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Aeronautics in Germany. Sci Am S 75:322 My 24 '13

Aeroplane, motor, or aviator? E. L. Ovington. Il Eng M 44:339-44 D '12

Data from German aviation motor contest of interest to builders of automobile motors. Automobile 29:716-8, 776-8 O 16-23 '13

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Ambrose channel as measured by the Panama canal. Sci Am 108:242-3 Mr 15 '13

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Annual meeting, Boston, September, 1913. J Account 16:312-8 O '13

President's address at annual meeting, Boston, Sept. 15-19, 1913. R. H. Montgomery. J Account 16:265-7 O '13

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Proceedings of 4th annual midyear conference, 1913. Elec Ry J 41:184-96 F 1 '13

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Meeting of executive committee, New York, Dec. 12, 1913. Elec Ry J 42:1294 D 20 '13

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23d general meeting, Atlantic City, April, 1913. Met & Chem Eng 11:178 Ap '13; Elec W 61:763-5 Ap 12 '13

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J 41:431-2 Mr 8 '13

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69:524 Mr 13 '13

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Mining engineers discuss iron and steel top-
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104th meeting, New York, 1913. Colliery 33:
499 Ap '13

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Ag 30 '13

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M. E. Eng & Min J 95:382-3 F 15 '13

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tute. Eng & Min J 96:466 S 6 '13

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American iron and steel association

End of an era. J. M. Swank. Iron Tr R 52:
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American iron and steel institute

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1913. Iron Age 92:956-60 O 30 '13

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Eng & Min J 95:1115 My 31 '13; Iron Age
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29 '13

5th general meeting at Chicago, Oct. 24-25.
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1913. Iron Age 91:1490-2 Je 19 '13

American mine safety association

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tember 22-24. W. Z. Price. il Colliery 34:
207-10 N '13

American mining congress

15th annual meeting, Spokane, 1913. il Col-
liery 33:377-8 F '13

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delphia, Oct. 20 to 25, 1913. Colliery 34:
290-9 D '13

16th annual session, Philadelphia, Oct., 1913.
Eng & Min J 96:841-7 N 1 '13

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Annual award of medals, 1913. Ry & Eng R
53:50 Ja 18 '13

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Scientific American gold medal awarded to
pulmotor. Colliery 33:484-5 Ap '13

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293-7 S 13 '13

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disposal and on river cleaning. Eng N 70:
759-61 O 16 '13

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R 53:141 F 15 '13

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23d annual convention, Montreal, Oct., 1913.
Ry & Eng R 53:992-4 O 25 '13

American railway engineering association

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Elec Ry J 41:553-4 Mr 22 '13

14th annual convention, Chicago, 1913. Elec
Ry J 41:543-8 Mr 22 '13; Ry & Eng R 53:
274-85 Mr 22 '13; Eng N 69: 640-4 Mr 27
'13; Eng Rec 67:sup 40 Mr 29 '13

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June, 1913. Elec Ry J 41:1065-6 Je 14 '13

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1913. Eng N 70:42-6 Jl 3 '13

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Elec Ry J 42:147-8 Jl 26 '13

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- Abstracts of some papers presented at the
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1913. Eng Rec 68:672-4, 700-2 D 13-20 '13
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phia. Eng Rec 68:sup 48,sup 60 D 13-20 '13
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- Abstracts of papers at the 3d annual conven-
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Mich. Eng N 70:728-32 O 9 '13
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Eng Rec 67:249-50 Mr 1 '13
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City. Iron Tr R 53:27-9; 34-9 JI 3 '13
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Age 42:28-9 JI 3 '13
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16th annual meeting, Atlantic City, June,
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1913. Elec Ry J 42:32 JI 5 '13
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Robert W. Hunt on application of speci-
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Ja 2 '13

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- Annual convention, Ottawa, June, 1913. Eng
N 69:1344-6 Je 26 '13
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'13
Value of membership. Eng N 70:774 O 16 '13
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American society of engineer draftsmen

- Fraternal American engineering society. W.
M. Smyth. Eng N 70:772-3 O 16 '13

American society of heating and ventilating engineers

- 19th annual meeting, New York, Jan., 1913.
Dom Eng 62:133-9 F 1 '13
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& Ven 10:27-35 F '13
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37:170-1 F 4 '13
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1 '13; Eng N 69:251-2 F 6 '13
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R. Low. Iron Power 38:212-4 Ag 5 '13

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- 9th annual meeting, New York, Dec., 1913.
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- Annual report for 1912. Iron Age 91:651 Mr
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53:78-81 Ja 25 '13

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5 F 8 '13

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America's cup. See Yacht racing**Amic acids**

- Acid amides in the soil. S: L. Jodidi. J Fr
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- Electricity in mines. H. S. Webb. Colliery
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- Capacity of ammonia compressors. R. L. Mossman. *Power* 38:200-1 Ag 5 '13
- Haber synthetic ammonia process. plans *Met & Chem Eng* 11:173-4, 211-4 Ap '13
- Mollier diagram for ammonia. *Power* 38: 398-400 S 16 '13
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- See also* Coke-oven gas; Gas manufacture
- Ammonium sulphate**
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- Reinforcing a scoured pier foundation at Newcomerstown, O. E. Stingel. diag Eng Rec 68:182 Ag 16 '13
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- Allentown, Pa.—reinforced concrete viaduct for heavy service. B. H. Davis. il plans Concrete Cem 2:161-8 Ap '13
- Allentown, Pa.—South Eighth street viaduct. il plans Eng N 69:759-63 Ap 17 '13
- Atherton avenue highway bridge, Pittsburgh. il plans Eng Rec 67:540-2 My 17 '13
- Broadway bridge across Oswego river and the New York barge canal at Fulton, N. Y. il plan Eng Rec 67:88-90 Ja 25 '13
- Capitol avenue bridge, Indianapolis, Ind. L. V. Sheridan. Munic Eng 45:268-9 S '13
- Carondelet park bridge, St. Louis, Mo. C. W. Martin. il plans Eng N 70:646-50 O 2 '13
- Catawba river bridge near Charlotte, North Carolina. il Eng Rec 67:272 Mr 8 '13
- Colorado street bridge over Arroyo Seco, Cal. E. E. Howard. il plan Eng Rec 67:568-70 My 24 '13
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- Concrete highway bridge at Ansonia, Connecticut. plans Eng Rec 67:219-20 F 22 '13
- Construction of the Martin's creek viaduct for Delaware, Lackawanna & Western railroad. il Eng Rec 68:710-2 D 27 '13
- Crooked river arch bridge, Oregon. il diags Ry Age 54:394-6 F 28 '13
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- Fall River, Mass. concrete arch bridge. il plan Eng Rec 67:465 Ap 26 '13
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- Halen reinforced-concrete bridge, Bern, Switzerland. il plans Eng N 70:531-7 S 18 '13
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- Lift bridges of Milwaukee. H. G. Tyrrell. il Munic Eng 45:2-7 Jl '13
- Long-span double-deck bascule drawbridge over the Kaministiquia river for Canadian Pacific Ry. il Eng N 70:308 Ag 14 '13
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- Adopted design of the Quebec bridge. R. Modjeski. diags Ry Age 55:559-63 S 26 '13
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 Latest bridge design for Sydney harbor, N. S. W.; the third largest span in the world. Eng N 70:220 Jl 31 '13
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- Highway bridge specifications: requirements outlined by U. S. office of public roads. Eng Rec 68:230-2 Ag 30 '13
- Instruction for the inspection of the fabrication of steel bridges. Ry Age 54:581-3 Mr 19 '13; Same, Ry & Eng R 53:306 Mr 29 '13
- Iron and steel railway bridge in German Cameroon. A. Gradenwitz. il Eng Rec 68:134 Ag 2 '13
- Necessary precautions in the design and supervision of construction of low-truss steel highway bridges. G. M. Braune. Eng N 70: 398-9 Ag 28 '13
- Nisqually river pipe-line bridge; design and erection at La Grande, Wash. il plan Eng Rec 67:327-8 Mr 22 '13
- Observations on bridge expansion. H. A. Loser. diag Eng N 70:1170-1 D 11 '13
- Reinforcing an old cantilever bridge. Philadelphia, Penn. il plan Eng N 70:487-9 S 11 '13
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- Steel highway bridge specifications of the U. S. office of public roads. Eng Rec 68: 255 S 6 '13
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- Tests of two large nickel steel columns. H. W. Hodge. il plan Eng Rec 67:234-5 Mr 1 '13
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- Cables of the Halsted street lift bridge at Chicago. Eng N 70:371-2 Ag 21 '13
- City waterway bridge, Tacoma, Washington. il Eng N 69:1010 My 15 '13
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- Chinese railway bridge. F. C. Coleman. il Sci Am S 75:181 Mr 22 '13
- Construction features of the substructure of the Cumberland river bridge. L. & N. Ry. H. M. Jones. il map Eng N 69:1050-2 My 22 '13
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- Doubling the load capacity of an old iron railroad viaduct. il diag Ry Age 54:1322-4 Je 13 '13
- Drawbridges over rivers having limited navigation. C. E. Smith. Eng N 69:151-2 Ja 23 '13
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- Equivalent uniform loads on bridges for different types of engine. Eng N 70:824-5 O 23 '13
- Erecting a plate-girder bridge with a gantry traveler. il Eng Rec 67:663 Je 14 '13
- Erecting Canadian Pacific bridge over the St. Lawrence river. il diags Ry Age 54: 1027-9 My 9 '13
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- Erecting the Boucannet river (Canada) viaduct. Eng Rec 67:525-6 My 10 '13
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- Impact stresses in railroad-bridge design. Eng Rec 67:364 Mr 29 '13

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- Iron and steel railway bridge in German Cameroon. A. Gradenwitz. *il Eng Rec* 68: 134 Ag 2 '13
- Iron and steel structures. *Ry Age* 54:580-5 Mr 19 '13
- Kaw river bridge reconstruction. *il plan Eng Rec* 67:434-6 Ap 19 '13
- Lachine bridge erection across the St. Lawrence river. *il Eng Rec* 67:380-1 Ap 5 '13
- Largest bascule bridge: double-track, single-leaf span for Baltimore & Ohio bridge over Calumet river, Chicago. *il Eng Rec* 68:697 D 20 '13
- Lewistown-Great Falls line of the C. M. & St. P. Ry. *il plans Ry & Eng R* 53:685-9 JI 19 '13
- Lift bridges over the Buffalo river. E. Low. *il diags map Ry Age* 54:197-201 Ja 31 '13
- Maintenance engineering in railroad work. *Eng N* 69:109 Ja 16 '13
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- Motor cars for bridge gangs. *Ry Age* 55:786-7 O 24 '13
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- New type of vertical lift bridge. *plans Ry & Eng R* 53:390-1 Ap 26 '13
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- Partial wreck of the Sangamon river bridge by a derailed train: Wabash R. R. *Eng N* 69:89 Ja 9 '13
- Pennsylvania railroad has incased unsightly eight-track and five-track plate-girder spans in ornamental concrete. *il plans Eng Rec* 68:401-2 O 11 '13
- Progress on the lower Ganges bridge, northern Bengal, India. M. D. Brayshay. *il plans Eng N* 70:460-1 S 4 '13
- Protective coatings for railway bridge floors. A. W. Carpenter. *Eng N* 69:60-1 Ja 9 '13
- Providing for navigation during erection of drawbridges. *plan Eng N* 69:153-5 Ja 23 '13
- Question of impact on bridge substructures. C. M. Luther. *Eng N* 69:180 Ja 23 '13
- Railroad bridge design in Europe and America. *Eng Rec* 67:244-6 Mr 1 '13
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- Rebuilding of the burned Newark Bay trestle bridge, Pennsylvania R. R. *il Ry & Eng R* 53:796 Ag 23 '13
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- Reinforcing the Manistee river viaduct. *Eng Rec* 68:68 JI 19 '13
- Renewing two double track swing spans. *il diag Ry Age* 55:699-702 O 17 '13
- Replacing Cedar river bridge; building new and extending old piers; erecting plate-girder spans by derrick cars and by overhead jigger beams. *il Eng Rec* 68:183-5 Ag 16 '13
- Replacing high timber trestle near Boone, Iowa without interrupting traffic. *il Eng Rec* 67:187-8 F 15 '13
- Replacing Portageville [N. Y.] bridges. *il plan Eng Rec* 67:407 Ap 12 '13
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- Schuylkill river bridge improvements: widening a masonry arch structure on Pennsylvania main line in Philadelphia to carry a five-track passenger line. *il diag Ry Age* 55:1173-6 D 19 '13
- Southern Pacific bridge at Sacramento: double track, double deck, swing span. *il Ry Age* 54:846-9 Ap 11 '13
- Strauss single leaf bascule bridge at South Chicago. *il diag Ry Age* 54:605-6 Mr 19 '13
- Substructure for East river bridge division, New York connecting railway. *il diag Eng Rec* 68:328-30 S 20 '13
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- Track elevation of the P. R. R. at Pittsburgh. *il Ry & Eng R* 53:475-6 My 24 '13
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- Weldon viaduct over the Roanoke river: steel structure 3,688 feet long. *il plan Ry Age* 54:998-1000 My 2 '13
- Yardley (Pa.) bridge across the Delaware river. Philadelphia & Reading Ry. *il plans Eng N* 69:1101-8 My 29 '13
- Yardley (Pa.) bridge replacing. *il plans Eng Rec* 67:493-4 My 3 '13
- See also* Bridge inspection; Bridge painting

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- Bridge over the Rhine at Cologne. C. J. Kavanagh. *il plans diags Eng N* 70:845-9 O 30 '13
- Clifton chain suspension bridge, over the River Avon, at Bristol, England. *il Eng N* 69:191-2 Ja 30 '13
- Clifton suspension bridge, at Bristol, England. H. G. Tyrrell. *Eng N* 69:379-80 F 20 '13
- Comparative economy of cantilever and suspension bridges. *Eng Rec* 67:566-7 My 24 '13
- Miniature suspension bridge. R. O. Richards. *plan Power* 37:677 My 13 '13
- Proposed Hudson river bridge and tunnels to connect New York and New Jersey. *plans Eng N* 69:839-41 Ap 24 '13; *Eng Rec* 67:367, 384-7 Ap 5 '13; *Same cond. Eng M* 45:422-4 Je '13
- Proposed long-span bridge over the Mersey, Liverpool, Eng. *Eng Rec* 67:73 Ja 18 '13
- Suspension bridges and cantilevers. D. B. Steinman. *Eng Rec* 67:547-8, 577-8 My 17-24 '13

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- Briquetting coal. *il diag Collery* 33:687-9 JI '13
- Briquetting pitch from coke oven tar. *Iron Age* 92:589-90 S 11 '13
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- Use of nodulized ore in the blast furnace. R. H. Lee. *Am Inst Min E Bul* 82:2515-22 O '13; *Discussion. S4:2864-9 D '13*

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- Washington comment on New Haven wreck. Ry & Eng R 53:845 S 6 '13
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- Cost and how to count it. E. R. Lewis. Ry Age 54:1082 My 16 '13
- Depreciation of rolling stock equipment. F. Nay. Ry & Eng R 53:1295 D 27 '13
- Freight claim blanks. Ry Age 55:341-2 Ag 22 '13
- Has the Interstate commerce commission's system of accounts met with the needs of the commission? W. E. Hooper. Ry Age 55:954-7 N 21 '13
- Proposed railroad clearing house. Ry Age 54:90-1, 100-3 Ja 17 '13
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- Discipline versus automatic train control. J. D. Isaacs. Ry Age 54:6-7 Ja 3 '13
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- Bridges, stations and masonry work on the Montclair branch improvements. *il* Eng Rec 68:687-9 D 20 '13
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- Fuel oil installations, Northern Pacific Ry. plans Ry & Eng R 53:203-4 Mr 8 '13
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- Poured concrete buildings. D. L. & W. R. R., Nanticoke, Pa. *il* Ry & Eng R 53:455-6 My 17 '13
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- Baltimore & Ohio flood reconstruction. il Ry Age 55:106-9 JI 18 '13
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- Damage by floods to railroads in Ohio and Indiana. il Ry Age 54:806-8 Ap 4 '13
- Damage to structures in Indianapolis flood. D. V. Moore. il map Eng N 69:870-5 Ap 24 '13
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- British railways, Electrification of. maps Elec Ry J 41:797-800 My 3 '13
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Southern Pacific bridge at Sacramento: double track, double deck, swing span. il Ry Age 54:846-9 Ap 11 '13

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Measuring the sewage of Sacramento. il plan Eng Rec 68:191-2 Ag 16 '13

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- Safety devices and measures**
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Forced circulation hot water system with boilers used interchangeably for steam and hot water, sanatorium of the Metropolitan life insurance co., Mt. McGregor, N. Y. plan *Heat & Ven* 10:17-24 D '13 (to be cont)
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- Sand dunes**
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New City Hall of San Francisco. *il plan Munic Eng* 45:419-23 N '13
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- Hydroelectric plant at Trollhättan. *il plan Elec W 61:89-94 Ja 11 '13*

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